

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Canceled).

2. (Previously presented): The method according to claim 15, wherein the polyolefin of cross-linking step (a) is produced by copolymerizing at least one olefinic monomer selected from the group consisting of ethylene, propylene, 1-butene, 1-pentene, 1-hexene, 4-methyl-1-pentene, 3-methyl-1-pentene, 3,3-dimethyl-1-butene, 3-methyl-1-hexene, and 2,4,4 trimethyle-1-pentene.

3. (Previously presented): The method according to claim 15, wherein the plasto-elastomeric composition comprises between 10% and 90% of the polyolefin by weight and between 90% and 10% of the EPDM terpolymer by weight.

4. (Previously presented): The method according to claim 15, wherein a main polymeric chain of the EPDM terpolymer consists of at least two olefinic monomers and one dienic monomer, and wherein the two olefinic monomers and one dienic monomer in the main polymeric chain are conjugated or not conjugated.

5. (Canceled).

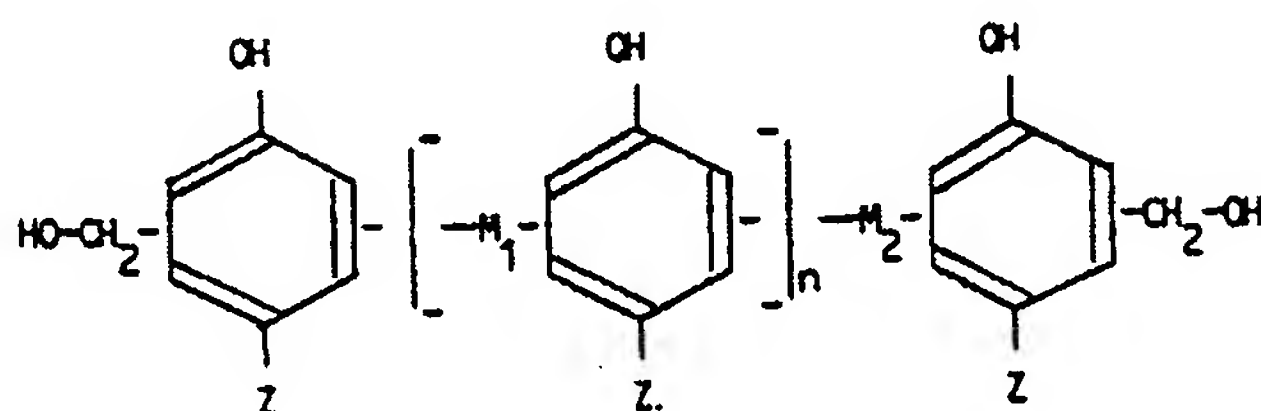
6. (Previously presented): The method according to claim 4, wherein the one dienic monomer is selected from the group consisting of ethylidene-norbornene, a derivative of ethylidene-norbornene, 1,4-hexadiene, a derivative of 1,4-hexadiene, dicyclopentadiene, a derivative of dicyclopentadiene, 2-methyl-1,4-pentadiene, a derivative of 2-methyl-1,4-pentadiene, 1,4,9-decatriene, a derivative of 1,4,9-decatriene, 1,5-cyclopentadiene, a derivative of 1,5-cyclopentadiene, polybutene, a derivative of polybutene, polybutadiene, and a derivative of polybutadiene.

7. (Previously presented): The method according to claim 15, wherein the at least one filler of mineral origin is calcium carbonate.

8 -14. (Canceled).

15. (Previously presented): A method for producing a recyclable and nontoxic plasto-elastomeric composition, the method comprising the steps:

(a) cross-linking an EPDM terpolymer and a polyolefin by combining a nonhalogenated alkylphenol-formaldehyde phenolic resin of formula (I) :



wherein M_1 and M_2 are $-CH_2-$ or $-CH_2-C(=O)-CH_2-$ radicals, which may be the same or different, Z is an alkenyl, acrylic or alkyl radical containing between 4 and 16 carbon atoms, and n is an integer between 0 and 6; and 0.1 parts to 0.8 parts by weight of salicylic acid for each part by weight of the resin;

wherein the cross-linking results in a partially or fully cross-linked elastomeric phase;

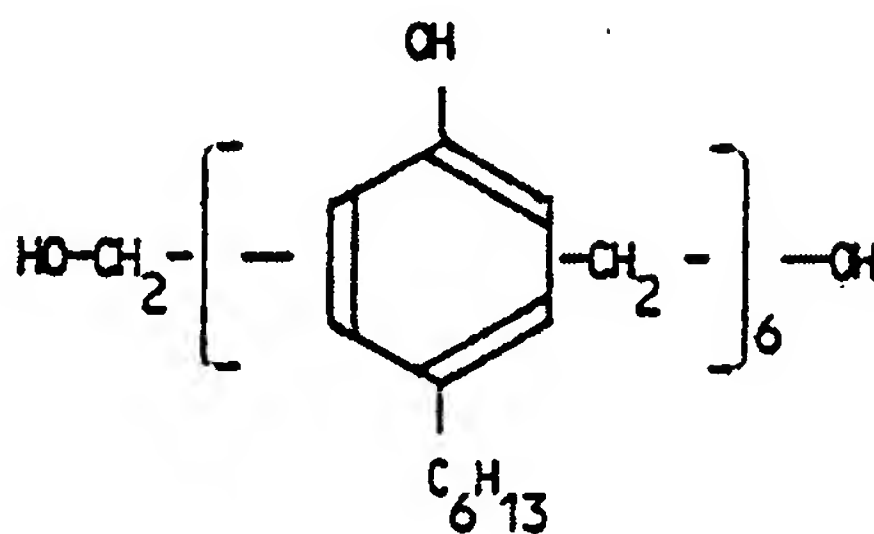
(b) adding at least one filler of mineral origin during or after cross-linking step (a), so that the recyclable and nontoxic plasto-elastomeric composition reaches a maximum specific gravity of 2 kg/dm^3 and a hardness ranging from ShA 40 to ShD 50;

wherein the at least one filler of mineral origin is selected from the group consisting of calcium carbonate, aluminium hydroxide, magnesium hydroxide, and barytes;

wherein the at least one filler of mineral origin represents 90% or less by weight of the plasto-elastomeric composition; and

wherein the recyclable and nontoxic plasto-elastomeric composition does not produce chlorine or dust or contain heavy metals.

16. (Previously presented): The method according to claim 15, wherein the nonhalogenated alkylphenol-formaldehyde phenolic resin of formula I is a phenol-formaldehyde type resol of formula (II):



(II)

17-19. (Canceled).

20. (New): The method according to claim 15, wherein the at least one filler of mineral origin is aluminium hydroxide.

21. (New): The method according to claim 20, wherein the aluminium hydroxide represents 75% by weight of the plasto-elastomeric composition.

22. (New): The method according to claim 15, wherein the at least one filler of mineral origin is magnesium hydroxide.

23. (New): The method according to claim 15, wherein the at least one filler of mineral origin is barytes.

24. (New): The method according to claim 23, wherein the barytes is a barium sulphate.